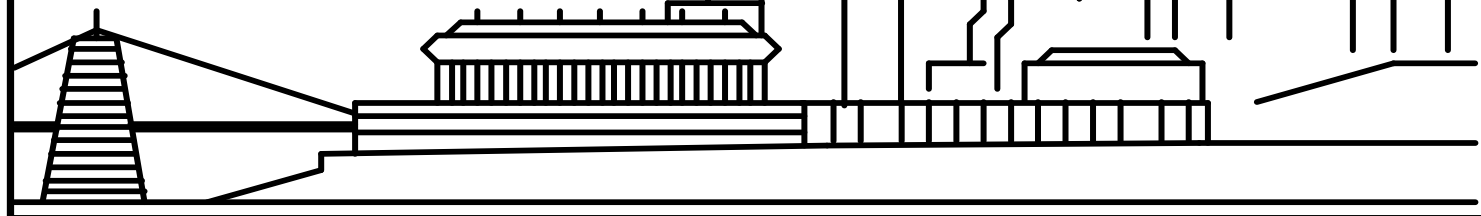




INSTITUTE OF
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ELECTRONICS
ENGINEERS, INC.



APRIL 1999

IEEE CINCINNATI SECTION NEWSLETTER

APRIL MEETING

Few Gold Stars For Precollege Education

DATE : April 22, 1999

PLACE : Quality Inn Central (Norwood) - See directions below.

TIME :	5:00 to 7:00 PM (IEEE-hosted dinner w/ hors d'oeuvres)	COST: \$10.00 (Members)
	7:00 PM (Program)	\$5.00 (Students)
	8:30 PM (Approx.- Adjournment)	\$18.00 (Non-Members)

RESERVATIONS ARE REQUIRED FOR DINNER ONLY !!!

THE CINCINNATI SECTION NOW HAS ITS OWN VOICE MAILBOX for making reservations for meetings or for providing comments or suggestions to **YOUR** Executive Committee.

Please call the Cincinnati Section Voice Mailbox at 629-9380, by **Noon, Tuesday, April 20, 1999** if you plan to attend. Please leave your **Name** and **IEEE Member Number**.

ABOUT THE MEETING: The presentation by Dr. Constantine N. Anagnostopoulos, will examine efforts to improve math and science education and technical literacy in the United States.

Education for technical literacy must begin early with a solid foundation in math and science. For this reason, the recently released Third International Mathematics and Science Study came as more bad news to U. S. educators and officials who are striving to improve primary and secondary education. The study, which compared U.S. 4th, 8th, and 12th grade students with their international peers had only one positive note: the performance in science of U.S. 4th graders was surpassed only by Korea.

Dr. Anagnostopoulos's April, 1998, Spectrum article "Few Gold Stars For Precollege Education" assesses the current state of U.S. science and math education and describes a number of initiatives by educators, and private organizations to improve matters. An open discussion will follow the presentation, so bring ideas and questions with you.

ABOUT THE SPEAKER: Dr. Constantine N. Anagnostopoulos, IEEE Fellow, is a research scientist at Eastman Kodak Co., Rochester, NY, and chair of IEEE-USA's Precollege Education Committee.

MEETING LOCATION DIRECTIONS: From I-75 or I-71, get off at the Route 562 exit (Norwood Lateral). Then take the Montgomery Road exit off of 562.

Coming from I-71, at the end of the Montgomery Rd. Exit ramp, take a left onto Norwood Ave., follow to stop light and take a left onto Montgomery Rd. Hotel is approximately 2 blocks down on the right.

Coming from I-75, at the end of the Montgomery Rd. Exit ramp, take a left onto Wesley Ave. At next stop sign, turn left onto Norwood Ave. Follow to stop light and take a left onto Montgomery Rd. Hotel is approximately 2 blocks down on the right.

CHAIR'S MESSAGE

by Ron Harbaugh, Section Chair

The month of April is here and the thought of Spring comes to everyone. Cold weather activities can be enjoyable, but most people look forward to the warm temperatures. For members of the Cincinnati Section, April is time to dust off the golf clubs to prepare for the annual IEEE Golf Outing in June. Information on the June Outing is coming in the newsletter that is near and dear to you now.

Before we think of golf and the summer recess, we have one more Section meeting on April 22, 1999. Information for that meeting is provided in this newsletter. We will look for you there.

We had a good turn out for the March meeting in Covington, proof to me that the Cincinnati Section can do an enjoyable get-together and still be a good learning experience for anyone who attends. Rob Pickering, of Cincinnati Bell, gave us a lot of information about construction of web pages, as well as some other information about what is happening on the world wide web. If you weren't there, you missed one of our best meetings.

Rob is a member of our Cincinnati Section. It is a pleasure to see and hear from one of our own who is in "engineering" action. I think members of our own Section have a lot of information to share. We will be pleased to have you present a program at one of the Section Meetings. Most of you have bragging rights on a product you have developed or something your company has done. We would like to hear it. Many of you have to make presentations as part of your job. Why not come over and practice on us. We will at least buy you a good meal. Please contact me or one of the Exec. Board members listed at the end of the newsletter.

And as a last reminder, our Pace program still needs your assistance to work with the young people in our schools. The help most needed right now is in the Forest Hills School District Pace program which is conducted by Jack Reed. Jack needs engineers to help him with talks to the kids about math and engineering. Moreover, the teachers are asking for your help with talking to the kids about math and science. Jack can use any volunteer. For our members who live in, or have children attending the Forest Hills school system, do yourself and your kids a favor and help them with the math and science in the school. You are the ones who have a personal stake in this. Contact Jack Reed at 231-7831 for more information.

A MESSAGE FROM YOUR PACE CHAIRMAN

by Bill Lohner, PACE Chairman

"A Network of Professional Activities for Engineers"

As mentioned in last month's article I would report on Jack Reed's (a member of our Committee) progress in starting a program to help students in the Forest Hills School District. Jack has put together a "Retired Engineers Team" to be a resource for math and science assistance in the district at one of the elementary schools. The team

consists of eight individuals with a variety of experiences. There are three electrical engineers, two mechanical engineers (one has a degree in both mechanical and electrical engineering), three chemical engineers and one with a degree in Environmental and Forestry Science. Their experience is in electrical utilities, electrical products, plastics, structural, marketing, plant managers, etc.

This is quite an impressive group. Only two members of the group are IEEE members. I would like to congratulate Jack on his hard work in putting this group together. We will keep Newsletter readers informed of their activities. Jack has also compiled a book list or directory on education that will be available to volunteers. If you want to help, give us a call.

We are also investigating whether to operate on our own or to work with other groups doing the same thing.

In the last issue of "The Institute" a small article was written describing the activities of the IEEE Pre-College Education Coordinating Committee, consisting of fifteen members, a cross section of engineers and educators. They have developed a framework for IEEE pre-college education initiative. The purpose is to see how the IEEE and the engineering community can collaborate with teachers to foster innovative teaching strategies for K-12 science, math and technology teachers.

This group is unique in that it recruits non-engineers to be on the committee. The IEEE Educational Activities staff director commented, "It is important that the IEEE take an active role in enhancing the technological literacy of K-12 students. We can only do so by listening to the educational needs of those on the front lines, the teachers themselves".

I feel Jack Reed is helping to accomplish that goal with his group. If you can help Jack please do so.

Bill Lohner
PACE Chairman
Cincinnati Section IEEE
Phone No. 513-385-7268

NEW MEMBERS

The following individuals are new IEEE members who are in our Section:

JERRY L. DUNHAM
HARRY R. KESSE
TATIANA I. LANNELONGUE
CHRISTOPHER S. WAHL

The following individuals are existing IEEE members who have moved into the Cincinnati Section:

DAVID CARL
YIMING HU
GARY L. JONES
KENNETH J. MCCLELLAN
DONALD E. OLIVER
DAVID E. SMART

We wish to extend our welcome to all of our Section's new members!!!

The Shift to Software: Part 3

by Dick Reiman, Historian

In 1985, Microsoft introduced Windows operating system, priced at \$99. It was comparatively slow as was its competition and most users stayed with the popular MS-DOS. In the late 1980's, Intel's 386 and 486 microprocessor made the graphic users interface practical.

In March 1988, Apple filed a lawsuit alleging that Microsoft's Windows 2 had violated the Macintosh's copyrights. If the suit were upheld, all future user interfaces would have to be "different". This would stifle innovation, and after three years, the suit was dismissed.

Microsoft was achieving dramatic growth and by the end of 1989 was a company with 4,000 employees and revenues of \$803 million, and profits of \$170 million. Some 2 million copies of Windows 2 were outselling IBM's OS/2 operating system, largely due to Microsoft's better marketing techniques.

Upgrading software packages, which were increasingly more sophisticated generated increasing revenues as users traded up. In May of 1990, Microsoft introduced Windows 3 with much fanfare. It included 400,000 lines of code compared to the 110,000 of Windows 2.

In 1991, IBM announced a new version of OS/2-release 2. It had cost \$1 billion to develop and was designed to replace all previous operating systems including MS-DOS and Windows on all IBM compatible computers. This was followed in 1994, by Apple's MacOS and made it available to all third-party developers for the first time. IBM sought to gain the organizational skills, and appealing software in competition with Microsoft, by buying Lotus Development Corporation for \$3.5 billion, the largest for software takeover to date. Apple became "like IBM" and counted on its new MacOS to give it new life.

While IBM brought the first important standard to the personal computer industry, its PC was not as user-friendly as the home and business user's wanted. Likewise, Apple had set a new graphical interface, and its Macintosh continued to sell well. In 1993, more than \$1 billion of software was sold for Apple's products, but this couldn't capture much of the \$7 billion of total expenditure of microcomputer software.

With increasing similarity of IBM and Apple operating systems, however, the product differences between Apple and its competition are fading. It may take Bill Gates to rescue Apple.

IEEE NEWS

This Month in IEEE Spectrum On-Line

COVER STORY

Missiles for all: the new global threat

More and more Third World nations are acquiring ballistic missiles, some even of intercontinental range. A flourishing underground trade in technology and expertise, and the ease with which simpler missiles can be built, keeps the market going. <http://www.spectrum.ieee.org/spectrum/0399/features/rock.html>

Old rivalries, new arsenals: should the U.S. worry?

Could a small country develop the capability to hit the United States with a long-range unconventional weapon during the first decades of the next century? If its leadership is determined, it might be able to do just that.

<http://www.spectrum.ieee.org/spectrum/0399/features/rog.html>

OTHER FEATURES

Domesticating the Internet

The question of who will supply the "last mile" pipe to the home could lead to some of the toughest fights the communications marketplace has ever seen. Winners will gain the revenues from supplying a cornucopia of phone, TV, and Internet services. <http://www.spectrum.ieee.org/spectrum/0399/features/int.html>

Digital TV in the United States

With fat prices and lean content, fewer than 20 000 digital TV sets have been sold in the four months since the launch of terrestrial digital broadcasting in the United States. Still, expectations are high for the greatest broadcast revolution since the introduction of color TV.

<http://www.spectrum.ieee.org/spectrum/0399/features/dig.html>

DSPs court the consumer

A new breed of consumer product draws on advanced audio compression and decompression schemes made practical by digital signal processors. The choices of particular algorithms and processors for specific products are examined for three innovative products: for digital home audio, for downloading audio from the Internet for real-time playback, and for phone calls using the voice-over-Internet protocol.

<http://www.spectrum.ieee.org/spectrum/0399/features/dsp.html>

Helping the Web help the disabled

The basic premise of the World Wide Web is to make information accessible to everybody--including those with disabilities. The technologies and techniques to do that are widely available today; all it takes is an awareness of them and the will to do the right thing.

<http://www.spectrum.ieee.org/spectrum/0399/features/dis.html>

IN SPECTRUM SELECT

Data express: a gigabit junction with the next-generation Internet

While others work on creating high-speed backbones to carry data for the long haul across the United States, researchers in North Carolina have created an on/off ramp that will be able to keep up with the information highway's gigabit-per-second traffic flow.

<http://www.spectrum.ieee.org/pubs/spectrum/9902/ngi.html>

New IEEE Web Site Features Virtual Reading Room

PISCATAWAY, NJ, 3 March 1999 – The IEEE Educational Activities Department announces the release of its Online Education Reading Room at <http://www.ieee.org/eab>.

Once inside the virtual room, viewers can click on any book in the best-selling IEEE Selected Readings series or *Engineers' Guides To Business Series*, and "flip through" the full text of its pages. Titles up for browsing include *Cellular Radio And Personal Communications*, *Smart Antennas*, *Recent Developments in Power Electronics*, *Marketing for Engineers*, *Working In A Global Environment*, *Writing For Career Growth*, and more!

Logical and user-friendly in its design, the reading room features:

- Keyword, title, and author search options
- Full table-of-contents displays for each title
- Navigation tools that enable viewers to move from page to page and section to section, and to zoom in for a closer look at diagrams and formulas
- Online ordering options

“Having a reading room on the Internet gives visitors the opportunity to browse through books before buying them, just as they would in a traditional bookstore,” says Alan Trembly, Business Development Manager for IEEE Educational Activities. “A distribution medium such as this really enhances the IEEE’s image as practitioner of the technology of the future.”

For more information about the reading room contact Alan Trembly at a.trembly@ieee.org.

TODAY'S ENGINEER Finds That the Customer Is Not Always Right

WASHINGTON, March 12, 1999 -- The March issue of TODAY'S ENGINEER puts a new spin on the husband's lament: "I knew I was marrying Miss Right – I just didn't realize her middle name was 'Always!'"

Technical consultants and clients often feel that way about their own relationships with each other. In "The Client is Always/Never Right," author Edmond H. Weiss delves into the complex dynamics of the consultant / client relationship.

Weiss writes: "Under the best of circumstances, the client and consultant educate each other. But in other cases, they systematically misunderstand and misjudge each other, so that neither is satisfied." The disconnection results if one or both parties have an understanding about himself or herself or the other that is not shared. He presents a consultant/client matrix, known as the Always/Never framework, in which both parties' stereotypical attitudes are predicted and dissected in light of either party being "Always Right" or "Never Right."

Weiss derives from this in-depth analysis a true-to-life picture of the hypothetical relationships that can, and often do, develop from the consultant/client interactions as a result of differing viewpoints and expectations that evolve during the course of a project.

Then the author, an associate professor of Communications at Fordham University Graduate School of Business, examines the specific discipline and tactics consultants should follow in each scenario. And he offers this salient piece of advice for both clients and consultants: "In any business or professional relationship, nothing is gained by doubting the fundamental intelligence or integrity of the other participant."

The new issue also features an in-depth interview with former Chrysler President Robert Lutz, author of GUTS, a best-selling book on business success. In the interview, Lutz discusses the importance of creativity, leadership, extreme technical competence, and the need to nurture corporate mavericks.

TODAY'S ENGINEER, which received a 1998 Communicator Award of Distinction, helps technical professionals transcend traditional boundaries, "think outside the cubicle," and develop an overall business perspective. The quarterly magazine is published by The Institute of Electrical and Electronics Engineers - USA, which promotes the career interests of U.S. members of the world's largest technical-professional society.

New IEEE Video Series Captures Engineering As Profession

PISCATAWAY, NJ, 15 March 1999 - Now available from the IEEE is the *Engineering Profession Videotape Series, Volume II*. Included in this volume are the six lectures that were recently given at North Carolina State University as part of the school's engineering graduate program. The six-videotape series seeks to prepare graduating seniors and recent graduates for entering new careers in industry and government. The following topics are presented:

Engineering Ethics

Maintaining Professional Vitality
Employee Benefit Options
Safety Engineering
Managing Investments & Financial Planning
Intellectual Property Protection

The series also includes a PC disk containing abstracts and authors' biographies, and PowerPoint presentation notes.

1999/6 hrs./6 VHS Tapes
IEEE order numbers: NTSC – EV5533-QVE; PAL – EV5534-QVE
IEEE List Price: \$155.00; IEEE Member price: \$125.00

Volume I of the *Engineering Profession Videotape Series* is also available for purchase from the IEEE.

Order from the IEEE Customer Service Department, 445 Hoes Lane, PO Box 1331, Piscataway, NJ 08855-1331, USA. For single sales, call 1-800-678-IEEE (1-732-981-0060 outside the USA and Canada); for company or institutional sales, call 1-800-701-IEEE; or fax 732-981-9667. Shipping and handling charges apply. E-mail: customer-service@ieee.org

Best-Selling IEEE Book Series Goes Electronic!

PISCATAWAY, NJ, March 24, 1999 - Now available on CD-ROM from the IEEE is the best-selling Engineers Guides To Business Series. Originally produced and still available in book format, this series seeks to develop within the business-minded engineer an awareness of non-technical skills. Titles in the series include:

Presentations That Work
Writing for Career Growth
High-Tech Creativity
Winning the New Product Development Battle
Building Internal Team-Partnerships
Teaching on TV and Video
Starting a High-Tech Company
Working in a Global Environment
Starting to Manage: The Essential Skills
Marketing for Engineers
Practicing Engineering Ethics

Highly applications oriented, this CD-ROM is meant to be used on the job to close the gap between the working engineer's technical knowledge and business know-how.

IEEE Product Code: EC105-QVE; 1 CD-ROM;
IEEE Member Price: \$79.99; IEEE List Price: \$99.99

Order from the IEEE Customer Service Department, 445 Hoes Lane, PO Box 1331, Piscataway, NJ 08855-1331, USA. For single sales, call 1-800-678-IEEE (1-732-981-0060 outside the USA and Canada); for company or institutional sales, call 1-800-701-IEEE; or fax 732-981-9667. Shipping and handling charges apply. E-mail: customer-service@ieee.org

IEEE Dielectrics and Electrical Insulation Conference

The IEEE Dielectrics and Electrical Insulation Society will cosponsor the conference entitled "1999 Electrical/Electronics Insulation Conference (EEIC)" (Meeting #6501). This conference will be held October 25 - 28, 1999 in Cincinnati, OH.

For further information, please contact, Mr. John Bullivant, P.O. Box 792, Lewiston, NY 14092, (905) 682-6288, (905) 682-0087 (fax), E-mail: johbull@vaxxine.com or Conference Services Dept., at IEEE Operations Center at (732) 562-3878.

Further information will be available in the September 1999 Cincinnati Section Newsletter.

<http://www.ieee.org/eab>



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The IEEE Cincinnati Section Member Names and Phone Numbers

Cincinnati Section Voice Mail (call for

629-9380

meeting reservations)

Ron Harbaugh - Chairman

Jim Everly - Vice Chairman

Orest Melnyk - Treasurer

Laurie Tappel - Secretary

Steve Olenick - Member-At-Large

Mark Strong - Member-At-Large

Jack Beckmeyer - Arrangements Chairman

Bill Lohner - PACE Chairman

Randy Holt – Membership

Bob Morrison - Editor

352-2941, Ron.Harbaugh@CinPD.RCC.ORG (E-mail)

556-4241, James.Everly@UC.Edu (E-mail)

397-5419, o.melnyk@ieee.org (E-mail)

397-6383, ltappel@cinbell.com (E-mail)

860-3456, Ext. 138, steveo@nova-eng.com(E-mail)

397-1439, m.strong@ieee.org (E-mail)

248-0901, 248-0226 (Fax), rfschapp@cinti.net (E-mail)

385-7268

572-5710 (Office), holthr@nku.edu (E-mail)

287-3697 (Office), 287-4155 (Fax)

j.r.morrison@ieee.org (E-mail)

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